

# INTERNATIONAL SEARCH REPORT

International application No.

PCT/AU2004/000429

## A. CLASSIFICATION OF SUBJECT MATTER

Int. Cl. <sup>7</sup>: G01N 33/52, G01N 33/574, C12Q 1/68

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

SEE ABOVE

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

SEE BELOW

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

MEDLINE, WPIDS, CAPLUS, BIOSIS (Comparative genomic hybridization, CGH, chromosomes, microarrays, karyotype)

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X Y	Fiegler H, <i>et al</i> ; Genes Chromosomes Cancer (2003, April, published online 27 January 2003), 36 (4): 361-74. 'DNA microarrays for comparative genomic hybridization based DOP-PCR amplification of BAC and PAC clones.' (Abstract; Introduction; Materials and Methods; Discussion)	1-6, 11-16, 19-35, 40-45, 48-58 and 104-108
X Y	Martinez-Ramirez A, <i>et al</i> ; Cancer Genetics and Cytogenetics (2003), 144(1): 87-89. 'Array comparative genomic hybridization analysis of myelodysplastic syndromes with complex karyotypes. A technical evaluation' (Entire document)	1-6, 11-16, 19-35, 40-45, 48-58 and 104-108

☒ Further documents are listed in the continuation of Box C

☒ See patent family annex

\* Special categories of cited documents:

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier application or patent but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

"&" document member of the same patent family

Date of the actual completion of the international search

18 May 2004

Date of mailing of the international search report

25 MAY 2004

Name and mailing address of the ISA/AU

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C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X Y	Sudbark R; <i>et al</i> ; Human Molecular Genetics (2001), 10(1): 77-83. 'X chromosome-specific cDNA arrays: identification of genes that escape form X-inactivation and other applications.' (Abstract; page 78; page 79, Discussion lines 1-3)	1-6, 11-16, 19-35, 40-45, 48-58 and 104-108
X Y	Voullaire L <i>et al</i> ; Prenatal Diagnosis. 1999 Sep; 19 (9): 846-51. 'Detection of aneuploidy in single cells using comparative genomic hybridization' (Abstract; Introduction, col 1; page 847, col 2, para 2; page 848, col 2, last para; Discussion)	1-6, 11-16, 19-35, 40-45, 48-58 and 104-108
Y	Solinas-Toldo S, <i>et al</i> ; Genes Chromosomes Cancer; 1997 Dec, 20 (4): 399-407. 'Matrix-based coparative genomic hybridization: biochips to screen for genomic imbalances.' (Abstract; page 400, col 1; page 405, Discussion to page 406, col 1, para 1)	1-58, 104-108
X	WO 2000/024925 (Luminis Pty Ltd) published 02.05.00. 'Karyotyping means and methods' (Entire document)	1-6, 11-16, 19-35, 40-45, 48-58 and 104-108
PX	Hu DG, <i>et al</i> ; Molecular Human Reproduction; 2004 Apr, 10 (4): 283-9. 'Aneuploidy detection in single cells using DNA array-based comparative genomic hybridization' (Entire document)	1-3, 5-15, 17- 32, 34-44, 46- 58 and 104- 108
PX	WO 2003/027638 (Spectral Genomics, Inc) published 03.04.2003. 'Methods for detecting genetic mosaicisms using arrays.' (Entire document)	1-6, 11-16, 19-27, 29-35, 40-45, 48-58 and 104-108

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## Box No. II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This international search report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:  
because they relate to subject matter not required to be searched by this Authority, namely:
2. ☒ Claims Nos.: 59-103  
because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:  
The invention lies in a method for comparing chromosomes from two different cells of different karyotypes for detecting chromosomal abnormalities using CGH and microarrays. Claims 59-103, however, relate to a nucleic acid that is attached to a solid surface, and as such the claims seem to lack what appears to be an essential feature of the invention- a method of detecting chromosomal abnormalities.
3. ☐ Claims Nos.:  
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a)

## Box No. III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

1. ☐ As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

### Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
- ☐ No protest accompanied the payment of additional search fees.

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This Annex lists the known "A" publication level patent family members relating to the patent documents cited in the above-mentioned international search report. The Australian Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

Patent Document Cited in Search Report		Patent Family Member	
WO	2000024925		
WO	2003027638	US	2003124584
Due to data integration issues this family listing may not include 10 digit Australian applications filed since May 2001.			
END OF ANNEX			